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## Photography — 110-size cartridges — Dimensions and format of film and backing paper

*Photographie — Chargeurs de format 110 — Dimensions et présentation du film et du papier  
protecteur*

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Reference number  
ISO 7374:1987 (E)

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International Standard ISO 7374 was prepared by Technical Committee ISO/TC 42, *Photography*.

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# Photography — 110-size cartridges — Dimensions and format of film and backing paper

## 1 Scope and field of application

This International Standard specifies the dimensions of 110-size film and backing paper.

This product was designed in SI units, which are therefore prime, unless specifically noted to the contrary in this International Standard.

This International Standard is intended to be used in conjunction with ISO 7261 and ISO 7330 to completely specify 110-size cartridges.

## 2 References

ISO 1, *Standard reference temperature for industrial length measurements.*

ISO 5, *Photography — Density measurements*

- *Part 2 : Geometric conditions for transmission density.*
- *Part 3 : Spectral conditions.*

ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications.*

ISO 7261, *Photography — 110-size cartridges — Dimensions.*

ISO 7330, *Photography — 110-size cartridges — Location and dimensions of film exposure and film identification notches.*

## 3 Dimensions

### 3.1 General

Dimensions apply at the time of cartridge manufacture at standard atmospheric conditions of  $23 \pm 2$  °C and  $(50 \pm 5)$  % relative humidity, as specified in ISO 554.<sup>1)</sup>

### 3.2 Paper format

The paper format dimensions shall be as given in figure 1.

### 3.3 Film format

The film format dimensions shall be as given in figure 2.

### 3.4 Negative films format

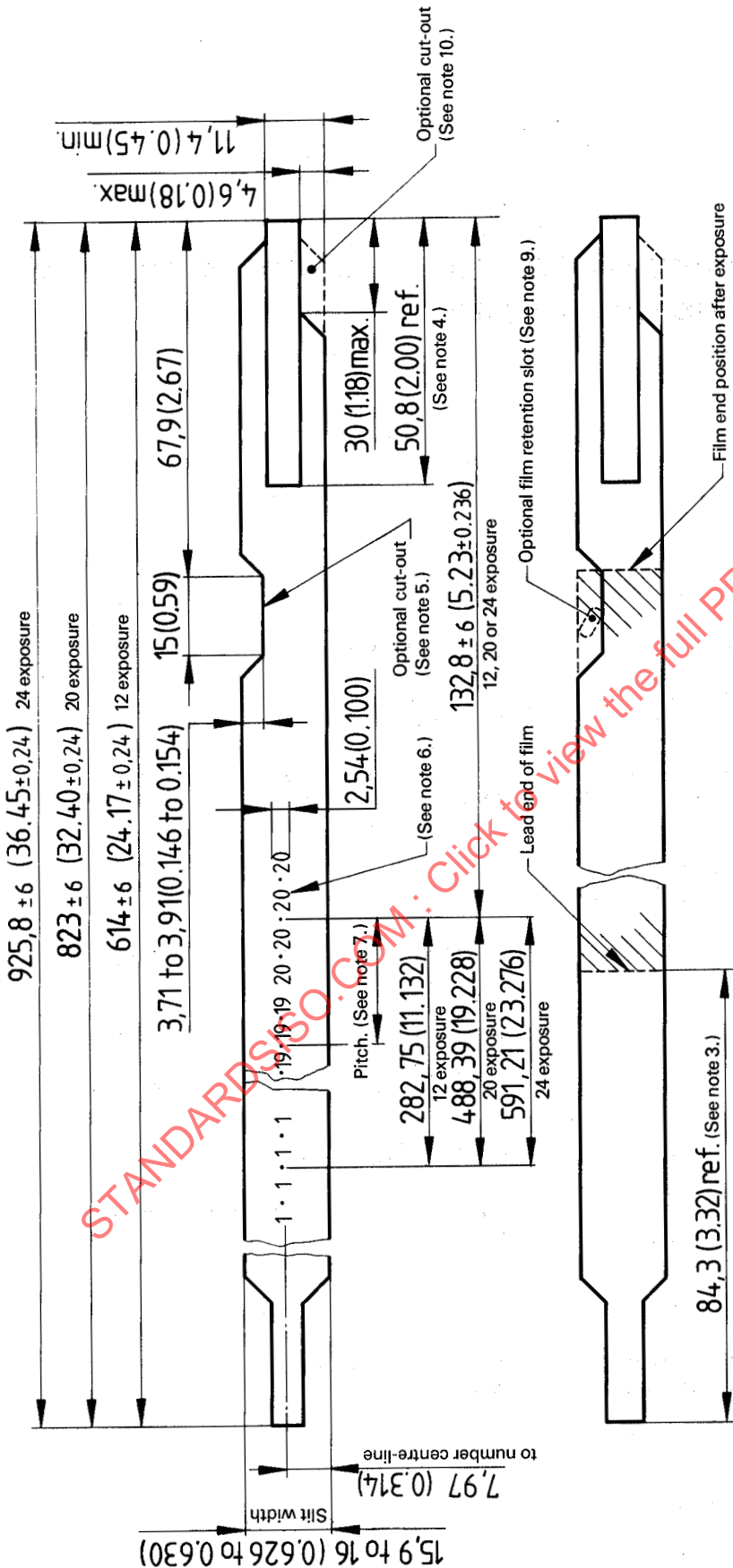
The negative films format dimensions shall be as given in figure 3.

### 3.5 Reversal films format

The reversal films format dimensions shall be as given in figure 4.

1) All measuring instrument calibrations are referred to a temperature of 20 °C (as specified in ISO 1) and a relative humidity of 50 %.

Dimensions in millimetres  
(Inch values in parentheses)



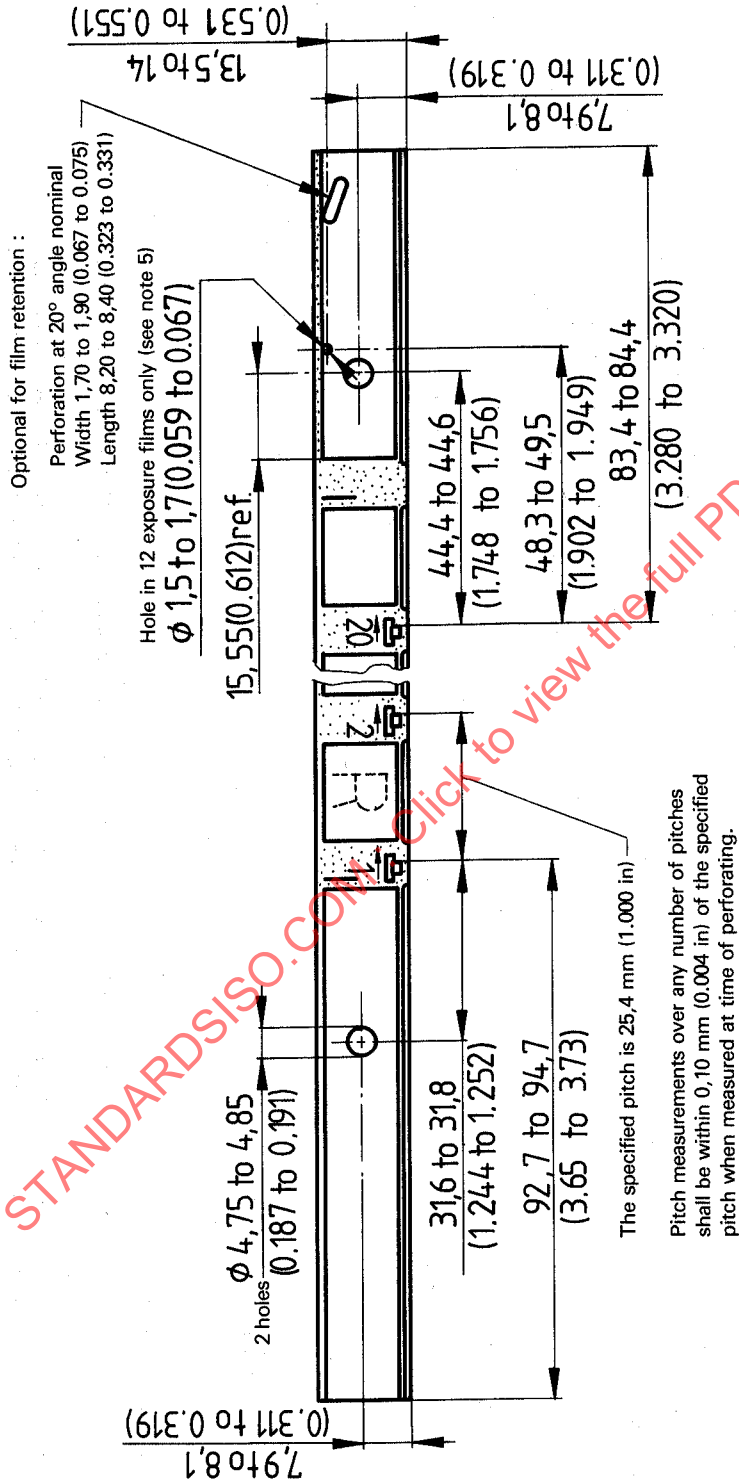
Paper/film relationship

NOTES

- 1 Viewed from rear of camera.
- 2 Tolerance ± 1,0 (± 0.04) unless otherwise stated.
- 3 Frame number corresponding to the exposure number shall appear in the camera window.
- 4 A black band or other identifier in the cartridge window indicates when the film is fully wound into the cartridge take-up chamber.
- 5 Optional cut-out provides access to film retention device if used. (See note 9.)
- 6 Number of numerals is optional.
- 7 Pitch 25,704 8 (1.012 00) ref. based upon film thickness of 0,10 mm (0.004 in).
- 8 Paper tear strength shall be sufficient to permit removal of paper and film from the take-up chamber (by pulling on the paper trailer).
- 9 Film retention slot, if used, shall fall within optional cut-out after exposure.
- 10 Optional cut-out reduces incidence of camera metering by paper trailer.

Figure 1 — Paper format

Dimensions in millimetres  
(Inch values in parentheses)



#### NOTES

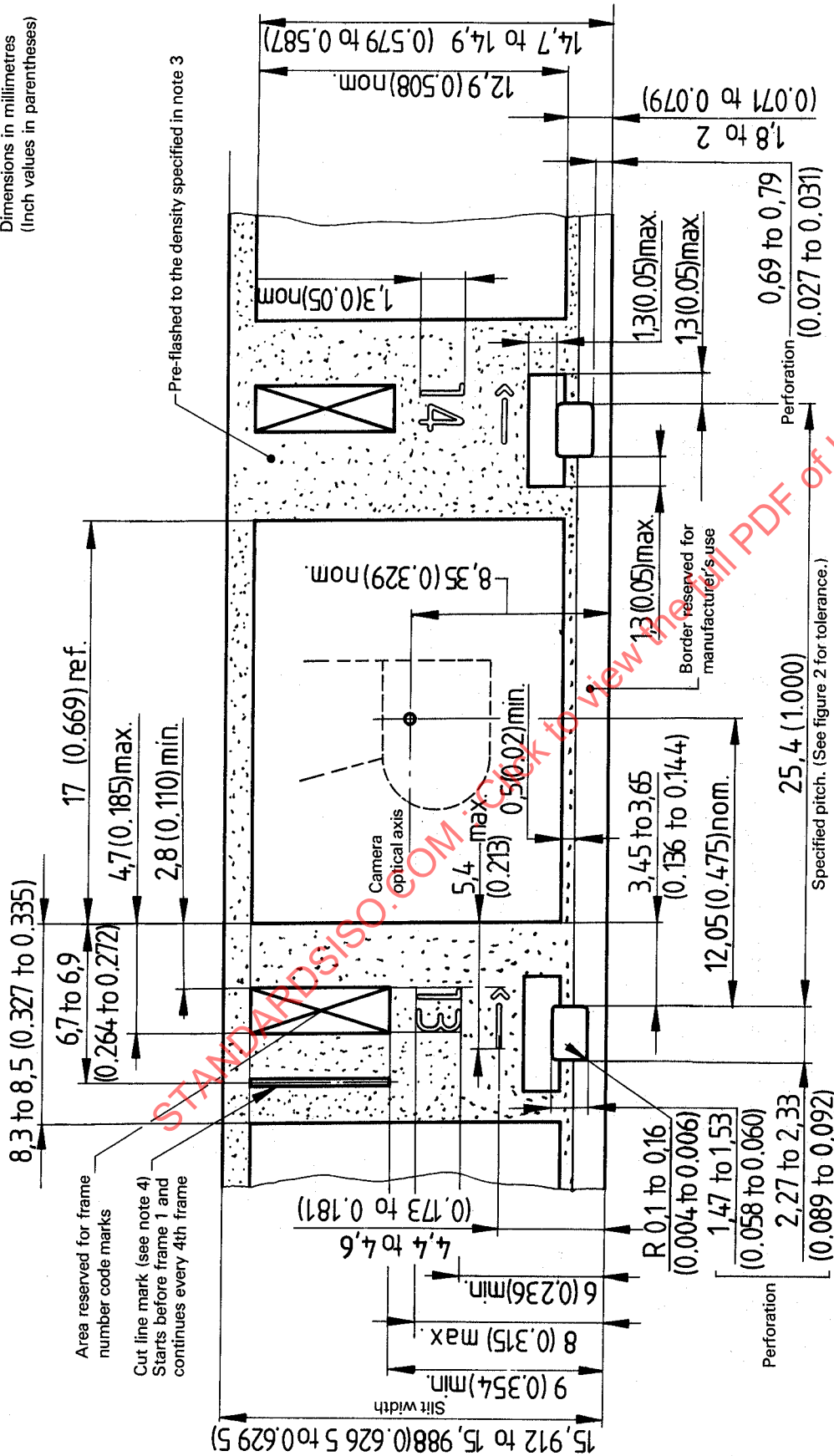
- 1 Viewed from support side as film goes through camera.
- 2 Negative format illustrated.
- 3 Total film length for
  - 24 exposures : 760 to 764 mm (29.9 to 30.1 in)
  - 20 exposures : 658 to 662 mm (25.9 to 26.1 in)
  - 12 exposures : 455 to 459 mm (17.9 to 18.1 in)

4 A path throughout the entire length of film 4,85 mm (0.191 in) wide and in line with 4,80 mm (0.189 in) diameter holes should not be violated with other holes of any type.

5 For use in automatic sensing equipment.

Figure 2 — Film format

Dimensions in millimetres  
(Inch values in parentheses)



NOTES

- 1 Viewed from support side of film
- 2 Image to show on print : 15,80 mm (0.622 in) by 12,00 mm (0.472 in) based upon camera aperture 19,30 mm (0.760 in) by 13,50 mm (0.532 in) and camera positioning tolerance  $\pm 1,15$  mm ( $\pm 0.045$  in).
- 3 Film is preflashed to ISO Status M diffuse blue, green and red densities not less than 0,8 above  $D_{min}$ , when measured with a densitometer complying with the geometric conditions specified in ISO 5-2 for diffuse density and with the spectral conditions specified in ISO 5-3 for Status M densities.
- 4 Cut line width 0,075 to 0,175 mm (0.003 to 0.007 in).

Figure 3 — Negative film format